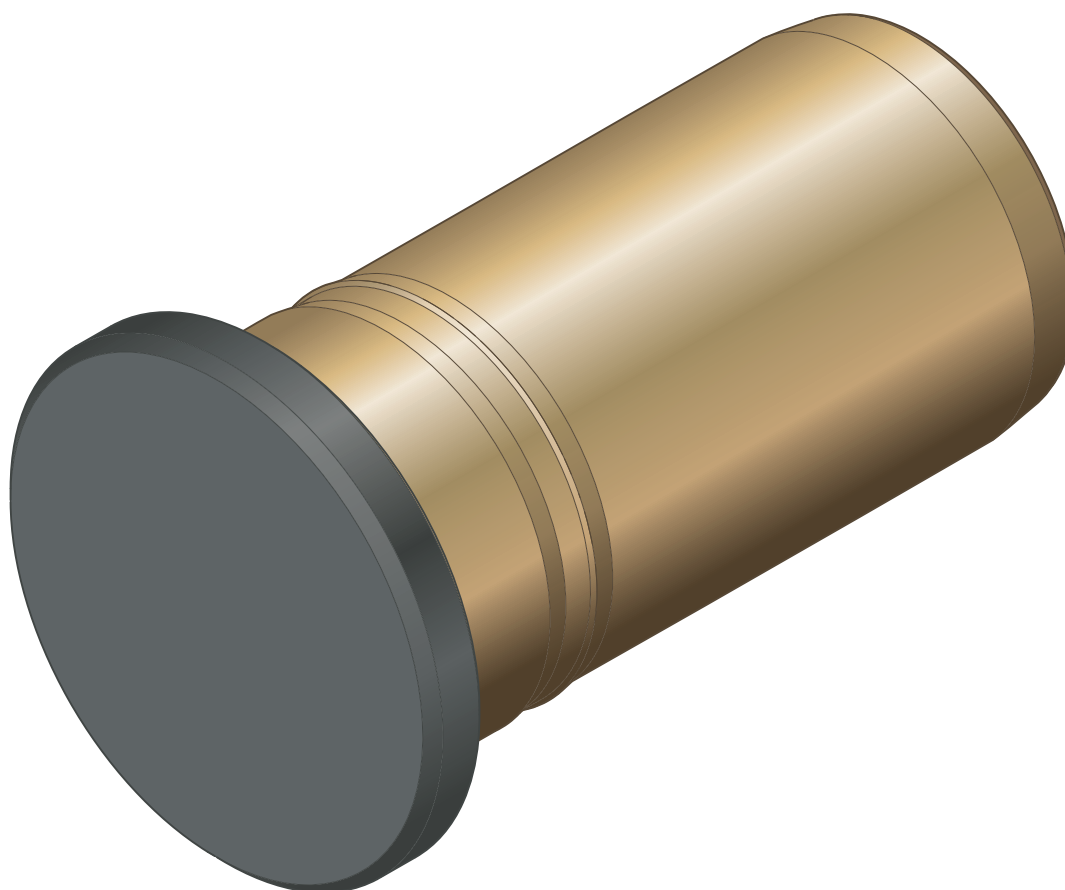


Instructions for Use

Geopress Gas flow monitor type A/D



for shutting off the flow of gas when the gas flow volume exceeds a prescribed value due to an unintended release of gas

Model
9653.2

Year built (from)
04/2005

viega

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1 About these instructions for use

Trade mark rights exist for this document; for further information, go to viega.com/legal.

1.1 Target groups

The information in this manual is directed at utility and pipeline construction companies and their technical professionals.

Only specialist companies which can prove they are qualified in accordance with the applicable directives may be engaged for the construction of gas and potable water house service connections, see ↗ *'Regulations from section: Target groups'* on page 5.

Individuals without the abovementioned training or qualification are not permitted to mount, install and, if required, maintain this product. This restriction does not extend to possible operating instructions.

The installation of Viega products must take place in accordance with the general rules of engineering and the Viega instructions for use.

1.2 Labelling of notes

Warning and advisory texts are set aside from the remainder of the text and are labelled with the relevant pictographs.



DANGER!

This symbol warns of possible life-threatening injury.



WARNING!

This symbol warns of possible serious injury.



CAUTION!

This symbol warns of possible injury.



NOTICE!

This symbol warns of possible damage to property.



This symbol gives additional information and hints.

1.3 About this translated version

This instruction for use contains important information about the choice of product or system, assembly and commissioning as well as intended use and, if required, maintenance measures. The information about the products, their properties and application technology are based on the current standards in Europe (e.g. EN) and/or in Germany (e.g. DIN/DVGW).

Some passages in the text may refer to technical codes in Europe/Germany. These should serve as recommendations in the absence of corresponding national regulations. The relevant national laws, standards, regulations, directives and other technical provisions take priority over the German/European directives specified in this manual: The information herein is not binding for other countries and regions; as said above, they should be understood as a recommendation.

2 Product information

2.1 Standards and regulations

The following standards and regulations apply to Germany / Europe and are provided as a support feature.

Regulations from section: Target groups

| Scope / Notice | Regulations applicable in Germany |
|---------------------------------------|-----------------------------------|
| Qualification of specialist companies | DVGW-Arbeitsblatt GW 301 |

Regulations from section: Application areas

| Scope / Notice | Regulations applicable in Germany |
|--|-----------------------------------|
| Planning, execution, modification and operation of gas house service connections | DVGW-Arbeitsblatt G 459-1 |
| Planning, execution, modification and operation of gas house service connections | DVFG-Arbeitsblatt TRF 2021 |
| Planning, execution, modification and operation of gas house service connections | DVGW-Arbeitsblatt G 472 |
| Planning, execution, modification and operation of gas house service connections | DVGW-Arbeitsblatt G 469 |

Regulations from section: Media

| Scope / Notice | Regulations applicable in Germany |
|---------------------|-----------------------------------|
| Gas characteristics | DVGW-Arbeitsblatt G 260 |

Regulations from section: Pipes

| Scope / Notice | Regulations applicable in Germany |
|--|-----------------------------------|
| Permitted use with piping materials in gas installations (PE-HD) | DIN 8074/75 |
| Permitted types of pipes (PE) – gas supply | DVGW-Arbeitsblatt GW 335-A2 |
| Types of pipe (PE) – gas supply | DIN EN 1555 |
| Permitted types of pipes (PE-X) – gas supply | DIN 16893 |
| Types of pipes (PE-X) – gas supply | DVGW-Arbeitsblatt GW 335-A3 |

Regulations from section: Technical data

| Scope / Notice | Regulations applicable in Germany |
|------------------------------------|-----------------------------------|
| Basis for the technical inspection | DVGW G 5305-2 (P) |

Regulations from section: Notes on mounting

| Scope / Notice | Regulations applicable in Germany |
|--------------------------------|-----------------------------------|
| Threshold values for ovalities | DIN 12201-2, Table 1 |

Regulations from section: Leakage test

| Scope / Notice | Regulations applicable in Germany |
|--|-----------------------------------|
| Leakage test of gas household connection installations | DVGW-Arbeitsblatt G 459-1 |
| Leakage test of gas household connection installations | DVGW-Arbeitsblatt G 469 |

2.2 Intended use



Agree the use of the model for areas of application and media other than those described with Viega.

2.2.1 Areas of application

The gas flow monitor is suitable for use in gas house service connections. As active protection, the gas flow monitor interrupts the gas supply of the house service connection in case of accident.

Gas installation

For planning, execution, modification and operation of gas house service connections, observe the applicable regulations, see ↗ *'Regulations from section: Application areas'* on page 5.

2.2.2 Media

The model is suitable for gases in accordance with applicable DVGW guidelines, as well as for liquefied gases, only in the gaseous state, according to DVFG regulations, see ↗ *'Regulations from section: Media'* on page 5.

The max. operating pressure depends on the type of pipe used and the specific application.

Gas

- Operating pressure $p_{\max} = 1.0 \text{ MPa}$ (10 bar)
(with open gas flow monitor)

The maximum load of the closed gas flow monitor is 0.6 MPa (6 bar).

2.3 Product description

2.3.1 Overview

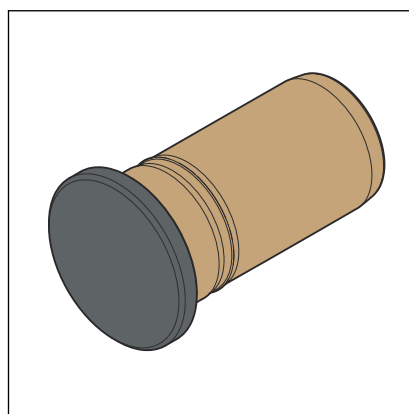


Fig. 1: 9653.2

The model is available in the following dimensions: d 32 / 40 / 50 / 63.

2.3.2 Pipes

The gas flow monitor can be used with the following pipes:

| d [mm] | PE-HD ¹⁾ | PE-X ¹⁾ |
|--------|---------------------|--------------------|
| | SDR 11 | SDR 11 |
| 32 | ✓ | ✓ |
| 40 | ✓ | ✓ |
| 50 | ✓ | ✓ |
| 63 | ✓ | ✓ |

¹⁾ see ↗ 'Regulations from section: Pipes' on page 6

2.3.3 Gas flow monitor

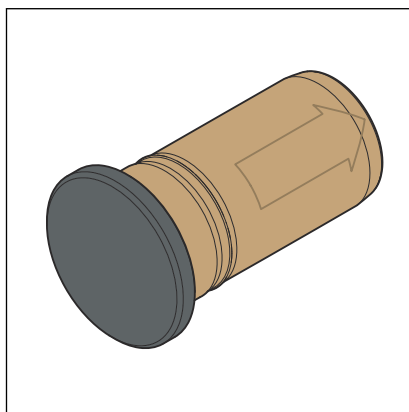
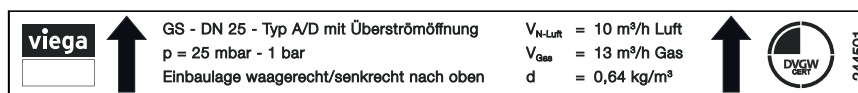


Fig. 2: 9653.2

The gas flow monitor is integrated into a support sleeve made of gun-metal/silicon bronze. This is placed in a pipe end and then pressed over with any Geopress G press connector.

2.3.4 Markings on components



The gas flow monitor is delivered with a sticker with the specifications on it, which can be attached to the pipe after mounting.

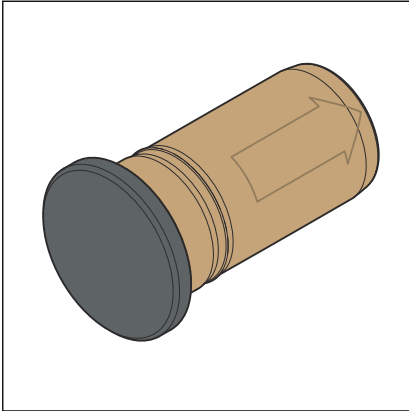
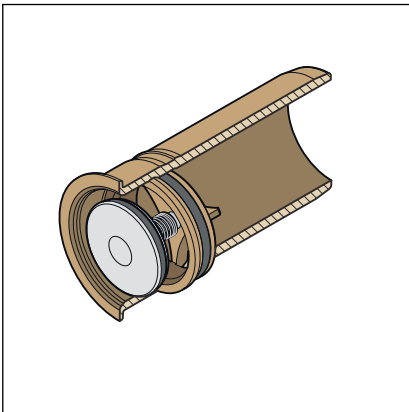


Fig. 3: Marking, installation direction

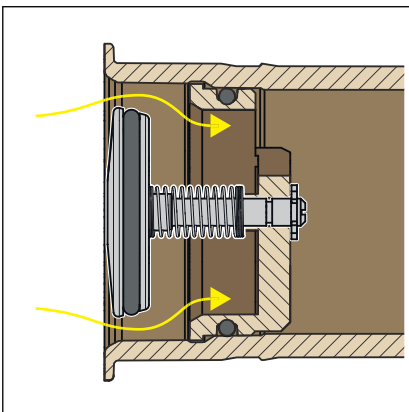
The model is marked with an arrow, which shows the direction of flow of the gas. This installation direction must be observed to ensure the functionality of the gas flow monitor.

2.3.5 Operating mode

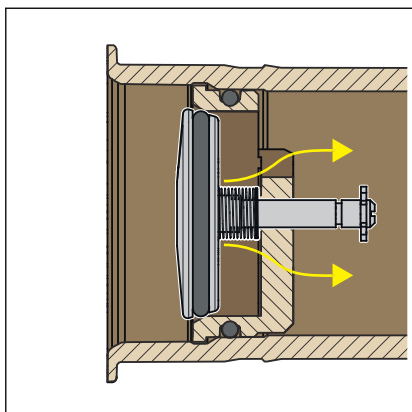
Gas flow monitor (GFM)



Geopress gas flow monitors are flow-activated fittings and serve as an active protective measure against the escape of gas in the case of a damaged gas house service connection.



- The gas flow monitor consists of a closing plate, which is held open during intended operation use by a spring force determined by type. The gas flow monitor therefore has a defined flow direction.
- In the case of a fault, the flow volume and the pressure behind the gas flow monitor change so that the spring force is no longer sufficient to hold the GFM open. The closing plate sits in its valve seat and closes the pipe. A further release of gas is prevented.
- The gas flow monitor is equipped with an overflow opening. It therefore opens automatically after a fault has been repaired. The opening process can be accelerated by the creation of counter pressure.



2.3.6 Technical data

GeopressGas flow monitors comply with the technical test regulation in accordance with the applicable regulations, see [Chapter 2.1 'Standards and regulations'](#) on page 5.

Operating pressure range GFM type A/D

| Operating pressure range and building requirement | Place of installation | Construction size |
|--|-------------------------------|---------------------------------|
| 0.0025–0.1 MPa (0.025–1 bar) DN related $\Delta p \leq 2.5$ hPa (2.5 mbar) Overflow volume \leq 30 dm ³ /h with 0.01 MPa (0.1 bar) | Directly at the tapping valve | up to DN 50 [d _a 63] |

Flow and pressure loss values GFM type A/D

| Nominal width [DN] | Nominal volume flow [m ³ /h air] | Nominal volume flow [m ³ /h gas] | Δp |
|------------------------|---|---|-------------------------|
| 25 [d _a 32] | 10 | 13 | 2.00 hPa (2.00 mbar) |
| 32 [d _a 40] | 13 | 17 | 2.48 hPa (2.48 mbar) |
| 40 [d _a 50] | 19 | 25 | 2.50 hPa (2.50 mbar) |
| 50 [d _a 63] | 31 | 40 | 2.40 hPa (2.40 mbar) |

In its delivery state, the gas flow monitor is preset for the operating pressure range of the respective type. On-site setting is not necessary.

Guide values for the protectable pipe length

Pipe length which can be protected when a gas flow monitor pursuant to the applicable regulations is used, see ↪ *Chapter 2.1 'Standards and regulations' on page 5.*

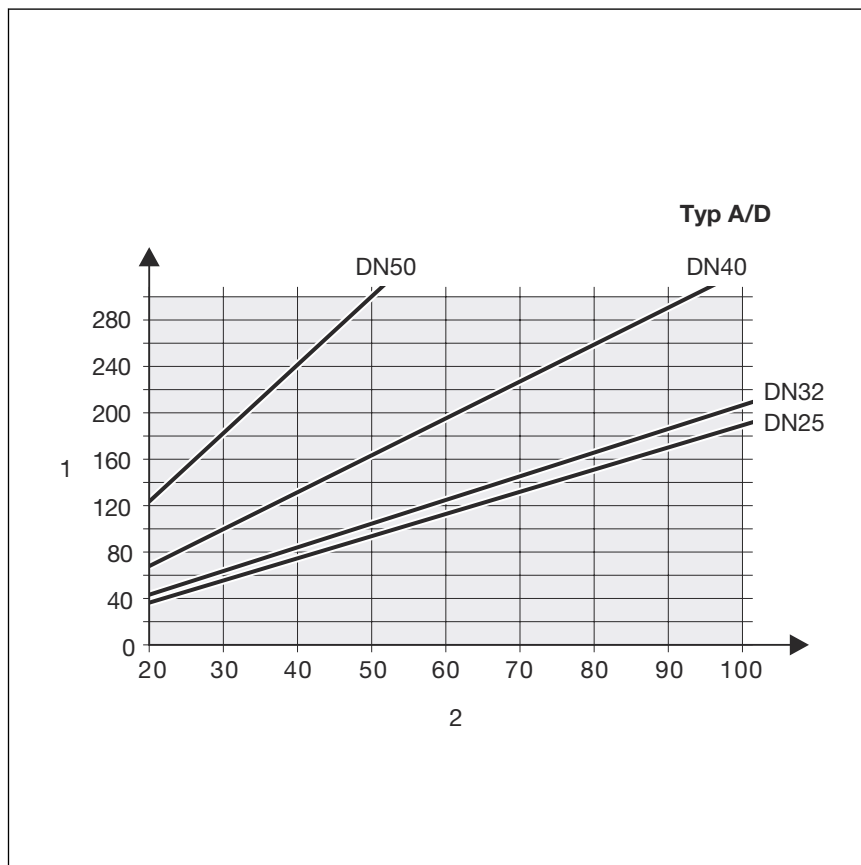


Fig. 4: Guide values for resistance coefficient $\zeta=10$ for the tapping valve and the main shut-off device

- 1 - Length (m)
- 2 - Mains system pressure (hPa)

3 Handling

3.1 Transport



Leave the gas flow monitor in the original packaging until use so that sensitive components do not become contaminated.

3.2 Storage



Leave the gas flow monitor in the original packaging until use so that sensitive components do not become contaminated.

3.3 Assembly information

3.3.1 Mounting instructions

Geopress G gas flow monitor:


- Install in the immediate vicinity of the tapping valve.
- Installation position horizontally or vertically upwards
- Check that the gas flow monitor is suitably designed for the application before installing.
- Observe installation direction.
- Excessive use of lubricants can impair the function.

Checking system components

System components may, in some cases, have become damaged through transportation and storage.

- Check all parts.
- Replace damaged components.
- Do not repair damaged components.

Pipes must be visually inspected for the following damage before installation:

- Ovalities: threshold values must not be exceeded, see  'Regulations from section: Notes on mounting' on page 6.
- Dents
- Cracks
- Grooves on the exterior (maximum depth 10 % of nominal wall thickness)

- Scoring on the inside (not permissible)
- damaged pipe ends

Only process the sections of the pipes, which do not exhibit these features.

Check scope of delivery

The following components must be included:

- Gas flow monitor with protective cap
- Sticker "Specifications"
- Information sign "Main shut-off device"
- Cable tie

3.3.2 Required tools

The following tools are required for mounting the gas flow monitor:

- rubber mallet
- screwdriver
- pipe cutter, pipe shear or saw
- deburrer and coloured pen for marking
- Battery-powered press machine
- hinged adapter jaw model 2296.2
 - Z2 with 32–63 mm diameter
- Press ring model 9696.1

Follow the care instructions for the pressing machine, see *Care instructions*.



Viega recommends the use of Viega system tools when installing the press fittings.

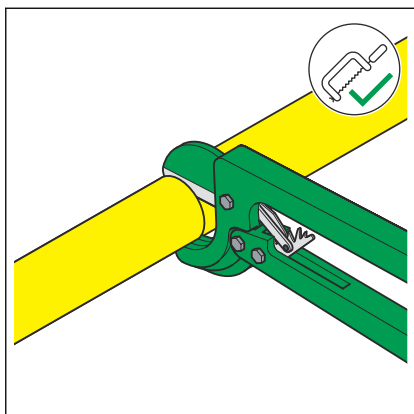
The Viega system press tools have been developed and tailored specifically for the installation of Viega press connector systems.

For information on how to combine Viega press machines with systems and accessories, refer to *Viega Tool Assistant*.

3.4 Assembly

3.4.1 Shortening the pipes

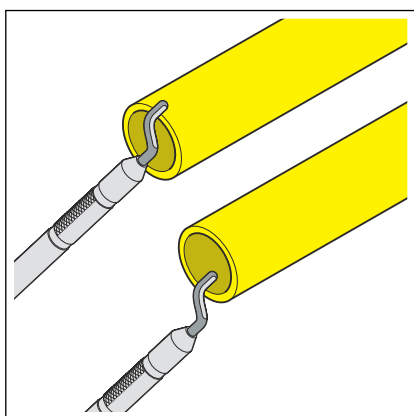
For information about tools, also see ↗ *Chapter 3.3.2 'Required tools' on page 13*.



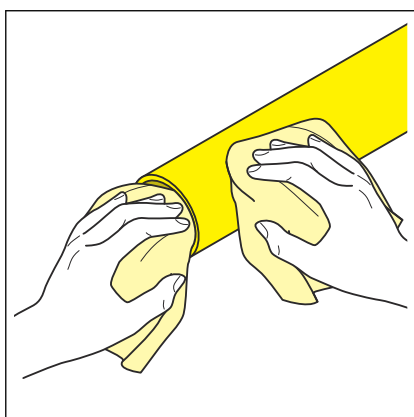
- ▶ Cut the pipe to length at right-angles using a pipe shear, pipe cutter or saw.

3.4.2 Deburring the pipes

The pipe ends must be thoroughly deburred internally and externally if shortened using a saw.

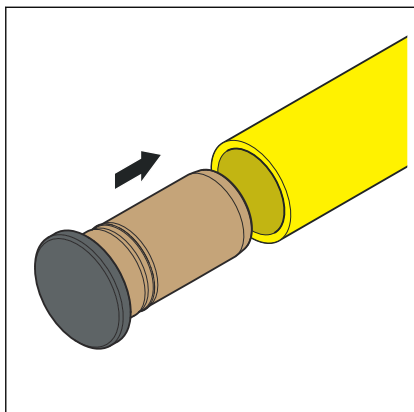


- ▶ Deburr the inside and outside of the pipe.
- ▶ When using protective jacket pipe, remove the protective jacket according to the manufacturer's instructions.

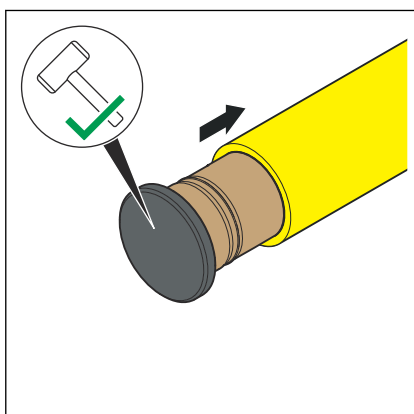


- ▶ Clean the pipe.

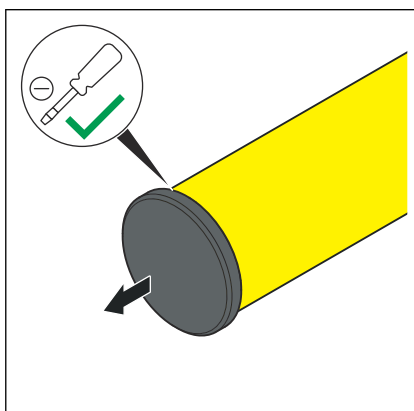
3.4.3 Installing supporting sleeve with gas flow monitor



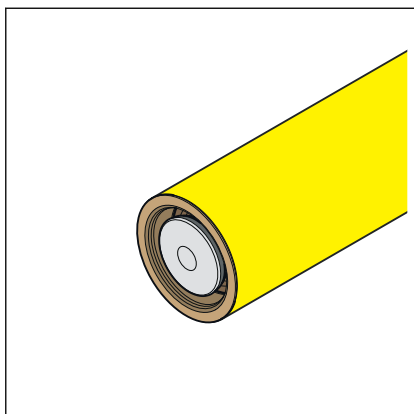
- Remove the gas flow monitor from the packaging and lead it into the pipe.



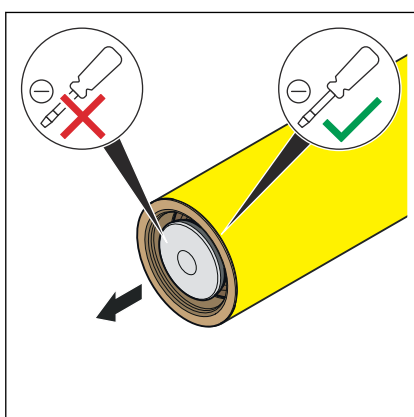
- Knock the gas flow monitor in as far as the flanging with the rubber mallet.



- Do not remove the protective cap with a screwdriver until immediately before continuing with the work.



- Properly fitted gas flow monitor - Avoid damage to the pipe surface.

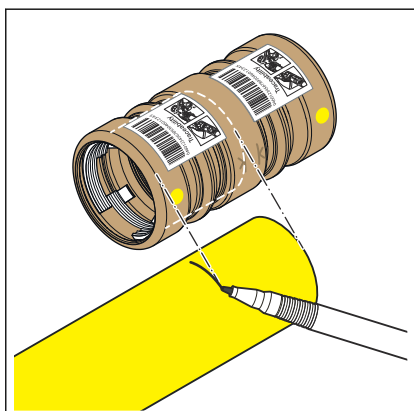


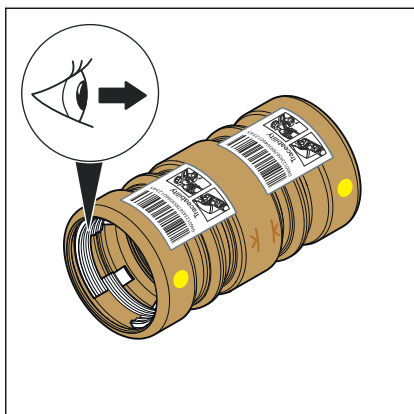
INFO! Disassembly Only place tools on the outside of the gas flow monitor.

3.4.4 Pressing the connection

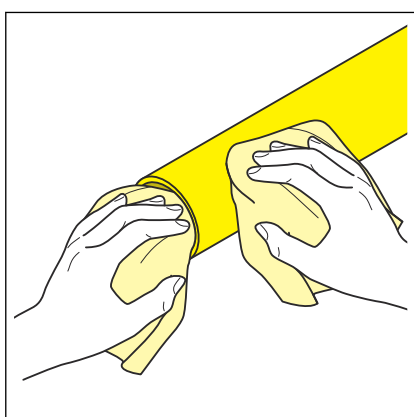
Requirements:

- The pipe end is not bent or damaged.
- The pipe is deburred.
- When using the protective coating tube, the protective coating is removed.
- The gas flow monitor is suitably rated for the project.
- The gas flow monitor is inserted up to the flanging and the protective cap is removed.
- The place of installation is close to the tapping valve.
- The sealing element and clamping ring are undamaged.
- Mark the insertion depth with the help of the marking on the press connector.

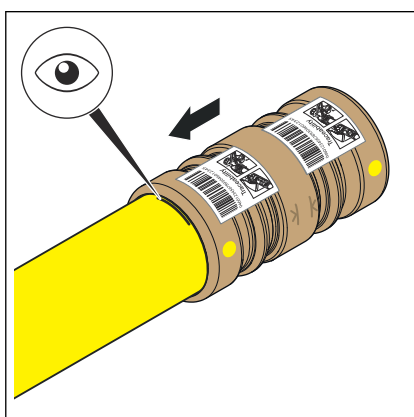




► Ensure that the sealing element is properly positioned.

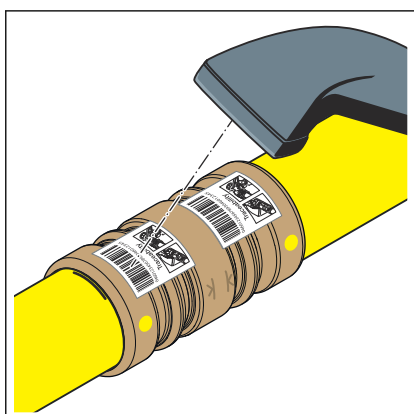


► Clean the pipe surface with a damp cloth.

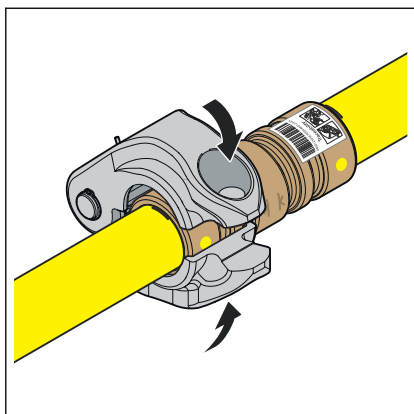


► Push the press connector up to the marked insertion depth on the pipe.

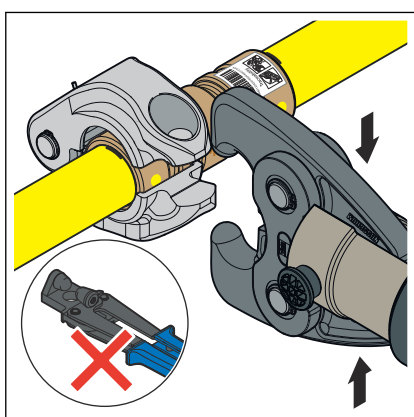
► Avoid contamination of the sealing element.



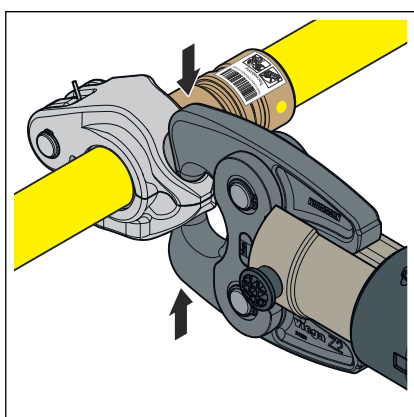
► Scan in the traceability code.



- Open the press ring and place it onto the press connector.



- Open the hinged adapter jaw and latch it into the holding fixture of the press ring.

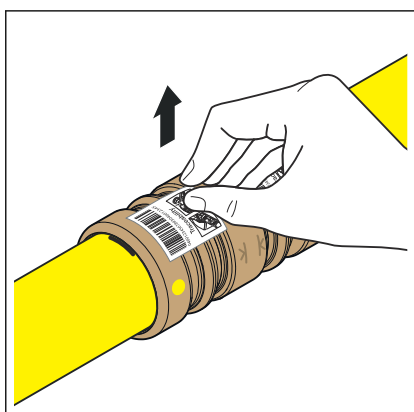


- Check the insertion depth.
- Carry out the pressing.

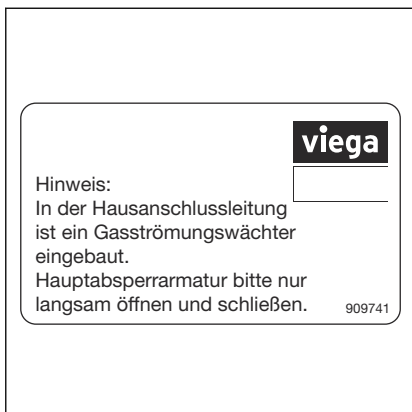
NOTICE!

The press ring must close completely during pressing.

- Make sure there is adequate space at the pressing point.
- Keep the press jaw contour and the area around the pressing point clean.



- Remove the traceability code.
 - The connection is marked as having been pressed.



- Attach the information sign to the main shut-off device.

3.4.5 Leakage test

Perform a leakage test according to the applicable regulations before commissioning the connection line, see ↗ *'Regulations from section: Leakage test' on page 6.*

Carry out the test on a house service connection that is finished but not yet covered. The result of the leakage test must be documented as proof of the safety of the pipeline.



- The testing air must flow in slowly upstream to the gas flow monitor so that it does not close.
- Testing opened gas flow monitors with air is permitted up to a maximum pressure of 1.0 MPa (10 bar).
- The closed gas flow monitor may only be subjected to pressures of a maximum of 0.6 MPa (6 bar).

3.5 Disposal

Separate the product and packaging materials (e. g. paper, metal, plastic or non-ferrous metals) and dispose of in accordance with valid national legal requirements.



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INT • 2022-08 • VPN210433

